Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-74   (canceled)

75.   (new) A method comprising performing a machine-executed operation involving instructions, wherein the machine-executed operation is at least one of:

A) sending the instructions over transmission media;

B) receiving the instructions over transmission media;

C) storing the instructions onto a machine-readable storage medium; and

D) executing the instructions;

wherein the instructions are instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

storing within a database and in association with a file system, a first object that defines a first method and an implementation of said first method, wherein said first object is an instance of a first object class; and

associating said first method with a first instance of a second object class that defines the properties of a file type associated with said file system, wherein the first method is not a method in said second object class.

76.   (new) The method of Claim 75, wherein said first method is not associated with a second instance of said second object class.

77.   (new) The method of Claim 75, wherein said second object class defines properties of folders in a file system.

78. (new) The method of Claim 75, wherein said second object class defines properties of documents in a file system.

79. (new) The method of Claim 78, wherein said second object class is sub-classed with a sub-class that defines properties of a text type of document in a file system.

80. (new) The method of Claim 78, wherein said second object class is sub-classed with a sub-class that defines properties of a spreadsheet type of document in a file system.

81. (new) The method of Claim 78, wherein said second object class is sub-classed with a sub-class that defines properties of a presentation type of document in a file system.

82. (new) The method of Claim 75, wherein the instructions are instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

in response to receiving a request for a file system operation involving said first instance, instantiating a transaction object that defines one or more methods from a group of database operations consisting of an insert operation, a save operation, an update operation, a delete operation, a commit operation, and a rollback operation; and

invoking at least one of said one or more methods for operation on said first instance of said second object class.

83. (new) The method of Claim 82, wherein invoking at least one of said one or more methods comprises invoking, in association with a single database transaction, more than one of said one or more methods.

84. (new) The method of Claim 75, wherein the instructions are instructions which, when executed by one or more processors, cause the one or more processors to perform the step of:

maintaining a cache of file system metadata for one or more instances of said second

object class.

85.   (new) The method of Claim 84, wherein maintaining a cache of file system metadata

comprises maintaining a cache of access permissions associated with instances of said

second object class.

86.   (new) The method of Claim 84, wherein maintaining a cache of file system metadata

comprises

maintaining a cache of a first access permission associated with said first instance of

said second object class, wherein said first access permission is associated with

said first instance based on said first method; and

maintaining a cache of a second access permission associated with a second instance of

said second object class, wherein said second access permission is associated

with said second instance based on a second method defined in a third object

that defines said second method and an implementation of said second method,

wherein said third object is an instance of a third object class.

87.   (new) The method of Claim 84, wherein maintaining a cache of file system metadata

comprises maintaining a cache of pathnames to files that are instances of said second

object class.

88.   (new) The method of Claim 84, wherein maintaining a cache of file system metadata

comprises

maintaining a cache of a first pathname to said first instance of said second object class,

wherein said first pathname is associated with said first instance based on said

first method; and

maintaining a cache of a second pathname to a second instance of said second object class, wherein said second pathname is associated with said second instance based on a second method defined in a third object that defines said second method and an implementation of said second method, wherein said third object is an instance of a third object class.

89.   (new) The method of Claim 75, wherein associating said first method with a first instance of a class comprises:

creating a first bundle object that is an instance of a first bundle class and that references one or more objects that define respective per-instance methods and corresponding implementations of said per-instance methods, wherein said first bundle class references said first object; and

associating said first instance of said second object class with said first bundle object.

90.   (new) The method of Claim 89, wherein associating said first instance of said second object class with said first bundle object comprises creating a pointer that belongs to said first instance to point to said first bundle object.

91.   (new) The method of Claim 89, wherein creating said first bundle object comprises creating a pointer that belongs to said first bundle object to point to said one or more objects.

92.   (new) The method of Claim 89, wherein associating said first instance of said second object class with said first bundle object.comprises creating a reference that belongs to said first instance to reference said first bundle object.

93.   (new) The method of Claim 92, wherein associating said first bundle object comprises creating a pointer that belongs to said first bundle object to point to said one or more objects.

94.   (new) The method of Claim 89, wherein associating said first bundle object comprises creating a reference that belongs to said first bundle object to reference said one or more objects.

95.   (new) The method of Claim 89, wherein creating said first bundle object comprises creating a hash table for indexing said first bundle object.

96.   (new) The method of Claim 95, wherein creating said first bundle object comprises placing an entry in said hash table, the method further comprising the computer-implemented steps of:

associating a key and a value with said entry;

using a method name as said key; and

using an association between said first bundle object and said first object as said value.

97.   (new) The method of Claim 96, wherein said value is a pointer to said first object.

98.   (new) The method of Claim 96, wherein said value is a reference to said first object.